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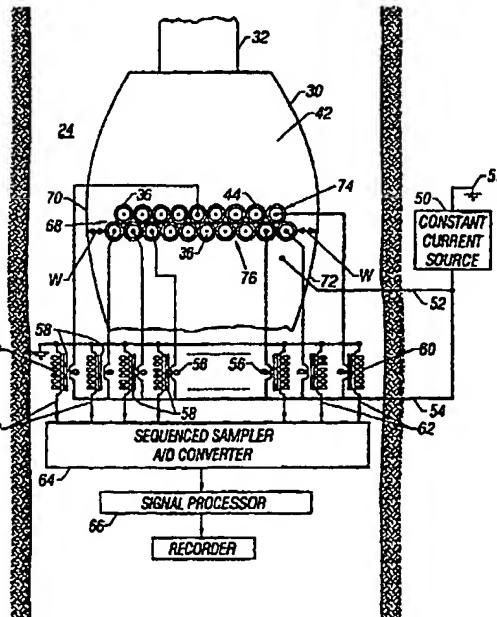
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(54) Abstract Title
An image focusing method and apparatus for wellbore resistivity imaging

(57) An apparatus for obtaining resistivity images of a borehole includes an array of measure electrodes separated from a pad or the body of the instrument by a guard electrode. The guard electrode is maintained at a slightly lower potential than the pad and the measure electrode is at an intermediate potential thereto. With this arrangement, the current from the guard electrode defocuses the measure current from the measure electrode as it enters the formation, and at greater distances, the current from the measure electrode is refocused by the effect of the current from the pad. This defocusing and refocusing defines a region of investigation away from the borehole wall that is relatively insensitive to borehole rugosity. Circumferential and vertical overlap may be obtained either by the arrangement of the measure electrodes, or by relying on the broadening of the measure beam as it enters the formation.



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